



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,446	08/01/2001	Denise L. Draper	337298001US1	6124
22434	7590	06/29/2007		
BEYER WEAVER LLP P.O. BOX 70250 OAKLAND, CA 94612-0250			EXAMINER TO, BAOQUOC N	
			ART UNIT 2162	PAPER NUMBER
			MAIL DATE 06/29/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/921,446	Applicant(s) DRAPPER ET AL.	
	Examiner Baoquoc N. To	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-22,36,38,40 and 45-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-22,36,38,40 and 45-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 42-44 are canceled and claims 9, 12-15, 18-22, 27-30, 36, 38, 40 and 45-50 are amended in the amendment filed on 04/11/2007. Claims 1-32, 36, 38, 40 and 45-53 are pending in this application.

Specification

2. The disclosure is objected to because of the following informalities: there is no disclosure of any computer and its computer and any computer-readable medium or interrelationship between the computer system or computer-readable media with the inventive steps to carry out the claimed invention.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 9 and 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 9 recited a computer-readable medium which can be any possible medium such as transmission including waves or energy forms because there is no disclosure from the specification. The examiner assume that the computer-readable medium as claimed does not limited just storage medium but also include any other form of known

medium.

Claim 15 recites a computer system however the specification never discloses a computer system and its component. The examiner assume that the computer system of the applicant claimed might include a software system such program. The only time the computer system is in the claimed.

Response to Arguments

4. Applicant's arguments with respect to claims 9, 15, 24 and 56 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues " the columns shown in Draper do not vary among rows of the same table and therefore a single data structure. While the four tables in combination form a "structured organization," the four tables are four distinct data structures. The columns of one of those data structures do not vary with the row of the data structure."

The examiner respectfully disagrees with the above argument. As fig. 3 discloses different column types associated with one row for example A-id, B-id, C-id ... are all different column. Therefore, the column of each row is vary based on the information of that row.

Applicant also argues "It is also important to note that Draper neither discloses nor suggests a row type, as claimed. Specifically, Draper neither discloses nor suggests a type column for storing row types, or storing a row type associated with each of the plurality of rows of a data structure in a type column, where the row type identifies

Art Unit: 2162

columns of the data structure associated with the corresponding row, thereby enabling the columns for each of the plurality of rows to vary based upon the row type for that row. In fact, in the example shown in FIG. 3, Draper shows four separate tables, rather than defining a different set of columns for each row of the same table. Accordingly, Applicant respectfully submits that Draper fails to anticipate any of the pending claims."

The examiner respectfully disagrees with the above argument. Drapper discloses each row of the might not have all the column for example the row 1 might have first name and last name and not thing more, a second row might have last name and phone number and address. Row type might have information in different column type associated with (col. 5, lines 34-67 and fig. 6a-b). Therefore, each row might have information of different types of columns.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2162

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-32, 36, 38, 40 and 45-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper et al. (US. Patent No. 6,581,062 B1) in view of Schinnerer et al. (US. Patent No. 5,909,225).

Regarding on claims 9, 15, 24 and 56 Draper teaches a computer-readable medium containing a data structure, the data structure having rows and column, the data structure comprising: a plurality of rows (table 62) (col. 4, lines 32-34); and a type column adapted to storing a row type each of the plurality of rows of the data structure, each row type indicating columns of the data structure associated with the corresponding row, thereby enabling at least one of the number of the columns or the identify of the columns for each of the plurality of rows to vary based on the row type for that row, wherein the type column is separate from the columns identified by each row type stored in the type column (FIG. 3 illustrated a structured organization for storing the semi-structured data of FIG. 2a-2b, in accordance with one embodiment. As illustrated, structured organization 52' include four relational tables 62-68. Table 62 includes one column each for storing identifiers of entities A, B, C, D, E and G, and data for entities C and D wherein the relational table includes rows which identified the columns in the same tables) (coll. 4, lines 29-43)

computer-readable instructions for storing data retrieved from two or more data stores in the columns for the plurality of rows (fig. 6a and 6b); and

computer-readable instructions for storing a row type for each of the plurality of rows of the data structure in the type column, wherein the row type for a corresponding one of the plurality of rows indicates the columns storing data for the corresponding row (fig. 6a and 6b);

Drapper does not explicitly teach wherein the two or more data stores include a first data store and a second data store, wherein the first data store stores data in a different format from data stored in the second data store, thereby enabling data retrieved from data stores storing data in different formats to be stored in a single data structure. However, Schinnerer discloses wherein the two or more data stores include a first data store and a second data store, wherein the first data store stores data in a different format from data stored in the second data store, thereby enabling data retrieved from data stores storing data in different formats to be stored in a single data structure (as corresponding a method embodiment of storing and providing data in first and second formats in an apparatus having a plurality of storage devices connected in a multiple rows and multiple column configuration...) (col. 2, lines 56-67). This suggests a single data storage be able to store data retrieved from different formats. Therefore, it would have been obvious one ordinary skill in the art at the time of the invention was made to modify Drapper teaching to include a single data storage be able to store data retrieved from different formats as taught by Schinnerer in order to increase database system flexibility the work with different data formats, language or application.

Regarding on claim 10, Draper teaches the computer-readable medium recited in claim 36 wherein a sub-column of one of the sub-rows of the nested data structure includes a further nested data structure (table 64 includes one column each for storing identifiers for entity E, F and data for entities F, whereas table 66 includes one column each for entities F. Similarly, table 68 includes one column each for storing identifiers for entities A, H and I, and data for entity I" (col. 4, lines 33-43).

Regarding on claims 11, 17 and 26, Draper teaches the computer-readable medium recited in claim 9, wherein the data structure is a nested conditional relation data structure (table 64 includes one column each for storing identifiers for entity E, F and data for entities F, whereas table 66 includes one column each for entities F. Similarly, table 68 includes one column each for storing identifiers for entities A, H and I, and data for entity I" (col. 4, lines 33-43).

Regarding on claims 12 18 an 27, Draper teaches the computer-readable medium recited in claim 33 wherein at least two rows of the data structure contain different row types in the type column (table 64 includes one column each for storing identifiers for entity E, F and data for entities F, whereas table 66 includes one column each for entities F. Similarly, table 68 includes one column each for storing identifiers for entities A, H and I, and data for entity I" (col. 4, lines 33-43).

Regarding on claims 13, 19 and 28, Draper teaches the computer-readable medium of claim 37 wherein at least two sub-rows of the nested data structure contain different row types in the type sub-column (col. 9, lines 51-65).

Regarding on claims 14, 20 and 29, Draper teaches the computer-readable medium of claim 9 wherein the row type for each of the plurality of rows identifies a schema for a type (table 64 includes one column each for storing identifiers for entity E, F and data for entities F, whereas table 66 includes one column each for entities F. Similarly, table 68 includes one column each for storing identifiers for entities A, H and I, and data for entity I" (col. 4, lines 33-43).

Regarding on claims 36, 38 and 40, Draper teaches the computer-readable medium of claim 9, the data structure further comprising:

A nested data structure, the nested data structure including sub-rows and sub-column, each of the sub-rows having a type value identifying a set of one or more sub-columns of the nested data structure associated with the corresponding sub-row, thereby enabling the set of sub-column for each of the plurality of sub-rows to vary based upon the type value for that sub-row (table 64 includes one column each for storing identifiers for entity E, F and data for entities F, whereas table 66 includes one column each for entities F. Similarly, table 68 includes one column each for storing identifiers for entities A, H and I, and data for entity I" (col. 4, lines 33-43).

Regarding on claim 48, Drapper teaches the computer-readable medium as recited in claim 9, wherein data is stored in the columns for each of the plurality of rows, thereby enabling the data to be retrieved from the columns indicated by the by the type value for that row (table 62) (col. 4, lines 32-34).

Claim 49, Drapper teaches the method recited in claim 48, further comprising:

Computer-readable instructions for retrieving data from one or more of the plurality of rows of the data structure, where the retrieved data is obtained from one or more of the columns indicated by the row type for that row (fig. 6a and 6b).

Claim 50, Drapper teaches the method recited in claim 9, further comprising:

Computer-readable instructions for retrieving data from one or more of the plurality of rows of the data structure, where the retrieved data is obtained from one or more of the columns indicated by the row type for that row (fig. 3-4 and fig. 6a-b).

Claims 21, 30 and 55, Drapper teaches the computer-readable medium as recited in claim 9, excepting for computer-readable instructions for receiving a query directed to multiple data stores including a first data store and a second data store, wherein the query is in the second format, the first data store is in the first format and the second data store is in the third format; computer-readable instructions for generating a first query directed to the first data store based on the first format using the received query and a mapping between the first format and the second format;

computer-readable instructions for generating a second query directed to the second data store based on the third format using the received query and a mapping between the third format and the second format; computer-readable instructions for executing the first generated query based on the first format against the first data store in the first format to generate first data wherein the generated first data is stored in the data structure; and computer-readable instructions for executing the second generated query based on the third format against the second data store in the third format to generate second data wherein the generated second data is stored in the data structure.

However, Schinnerer discloses computer-readable instructions for receiving a query directed to multiple data stores including a first data store and a second data store, wherein the query is in the second format, the first data store is in the first format and the second data store is in the third format; computer-readable instructions for generating a first query directed to the first data store based on the first format using the received query and a mapping between the first format and the second format; computer-readable instructions for generating a second query directed to the second data store based on the third format using the received query and a mapping between the third format and the second format; computer-readable instructions for executing the first generated query based on the first format against the first data store in the first format to generate first data wherein the generated first data is stored in the data structure; and computer-readable instructions for executing the second generated query based on the third format against the second data store in the third format to generate second data wherein the generated second data is stored in the data structure (as

Art Unit: 2162

corresponding a method embodiment of storing and providing data in first and second formats in an apparatus having a plurality of storage devices connected in a multiple rows and multiple column configuration...) (col. 2, lines 56-67). This suggests a single data storage be able to store data retrieved from different formats. Therefore, it would have been obvious one ordinary skill in the art at the time of the invention was made to modify Drapper teaching to include a single data storage be able to store data retrieved from different formats as taught by Schinnerer in order to increase database system flexibility the work with different data formats, language or application.

Regarding on claims 16 and 25, Drapper teaches the method of claim 38 wherein a sub-column of a sub-row of the nested data structure includes nested data structure (fig. 3.)

Regarding on claims 22 and 31, Draper teaches the method recited in claims 21 and 31 including the data of the created data structure into data in the second format (col. 9, lines 51-65).

Regarding on claims 23 and 32, Draper teaches the method recited in claim 21 and 30 wherein the second format is an XML format (col. 9, lines 51-65).

Regarding on claim 46-47, Drapper teaches method of recited in claim 15, wherein the type values stored in the type column are not data element and the column identified by the type of values are adapted for storing data elements (fig. 3).

Regarding on claim 51, Drapper teaches the method recited in claim 15, wherein the data stored in each of the column is a primitive type or a nested conditional relation (primary key or foreign key) (fig. 3).

Regarding on claim 52, Drapper teaches the method recited in claim 17, further comprising: converting first data from a first data format to a nested conditional relation prior to storing the data (col. 9, lines 51-65); wherein storing the data includes the converted first data (col. 1, lines 63-65).

Regarding on claim 53, Drapper teaches the method recited in claim 52, further comprising: converting second data format from a second format to a nested conditional prior to storing the data (col. 9, lines 51-65); wherein the data further includes storing the converted second data (col. 1, lines 63-65).

Conclusion

7. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Art Unit: 2162

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(571) –273-8300 [Official Communication]

BQ To

June 22nd 2007


CAM-Y TRUONG
PRIMARY EXAMINER